

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Planar lightwave circuit comprising an optical device, where the optical device comprises at least one piece of waveguide structure, ~~in particular~~ which is a piece of fiber, which that has at least one thin film layer deposited on an end facet, wherein the thin film is a filter or a saturable absorber.
2. (canceled).
3. (previously presented): The planar lightwave circuit according to claim 1, wherein the optical device is provided in a recess of the planar lightwave circuit.
4. (original): Planar lightwave circuit according to claim 1, wherein an index-matching material is located between the optical device and the planar lightwave circuit.
5. (original): Planar lightwave circuit according to claim 1, wherein the planar lightwave circuit is a duplexer.

6. (currently amended): A fiber array comprising at least one bundle of fibers, wherein at least one end facet of each fiber comprises a thin film, and wherein the thin film is a filter or a saturable absorber.

7. (currently amended): Method of processing an optical device comprising the following steps:

(a) sawing of a fiber into pieces or a fiber array into plates at a predefined angle with respect to the fiber axis;

(b) depositing at least one thin film on at least one end facet of the fiber piece or the fiber array plate,

wherein the thin film is a filter or a saturable absorber.

8. (currently amended): ~~Method according to claim 7,~~ A method of processing an optical device comprising the following steps:

(a) sawing of a fiber into pieces or a fiber array into plates at a predefined angle with respect to the fiber axis;

(b) depositing at least one thin film on at least one end facet of the fiber piece or the fiber array plate,

wherein the array of fibers is obtained by first bundling individual fibers to a fiber bundle, where the fibers are held together by a matrix material and second by joining the fiber

bundles to a fiber array using the matrix material for holding together the fiber bundles, and third consolidating the matrix material.

9. (original): Method according to claim 7, wherein the fiber end facet is polished prior to deposition of the thin film.

10. (currently amended): ~~Method according to claim 7,~~ A method of processing an optical device comprising the following steps:

(a) sawing of a fiber into pieces or a fiber array into plates at a predefined angle with respect to the fiber axis;

(b) depositing at least one thin film on at least one end facet of the fiber piece or the fiber array plate,

wherein the fiber pieces of the fiber array plate are separated after thin film deposition.

11. (currently amended): A planar lightwave circuit comprising:
an optical device that is integrated into the planar lightwave circuit structure,
wherein the optical device comprises at least one waveguide structure, and
wherein the at least one waveguide structure comprises at least one thin film layer
deposited on an end facet thereof,

wherein the at least one waveguide structure is an optical fiber having a core and a cladding, and

wherein the at least one thin film layer is a filter or a saturable absorber.

12. (previously presented): The planar lightwave of claim 1 wherein the thin film is a transmissive filter.

13. (currently amended): ~~The planar lightwave of claim 1~~ A planar lightwave circuit comprising an optical device, where the optical device comprises at least one piece of waveguide structure, which is a piece of fiber that has at least one thin film layer deposited on an end facet,
wherein the thin film is a saturable absorber.

14. (previously presented): The planar lightwave circuit according to claim 1,
wherein the planar lightwave circuit is a de-multiplexer.

15. (previously presented): The planar lightwave circuit according to claim 1,
wherein the planar lightwave circuit is a multiplexer.

16. (canceled).

17. (previously presented): A planar lightwave circuit comprising:
a planar waveguide interrupted by a recess to form two planar waveguide portions;

an optical fiber disposed in the recess optically coupling the two planar waveguide portions; and

at least one thin film layer at one end facet of the optical fiber.

18. (previously presented): The planar lightwave circuit of claim 17, wherein the optical fiber is configured to transmit light in substantially a straight line between the two planar waveguide portions.